

Docket No. MWH-0031US

12-18-01

JC14 Rec'd PCT/PTO 12 DEC 2001

PCT  
#3

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Liggett, Stephen B.

Application No.: 09/936,499

Group No.: To Be Determined

Filed: September 12, 2001

Examiner: To Be Determined

For: Variation in Drug Response Related to Polymorphisms in Beta-2 Adrenergic Receptor

Assistant Commissioner for Patents  
Washington, D.C. 20231

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT  
WITHIN THREE MONTHS OF FILING OR  
BEFORE MAILING OF FIRST OFFICE ACTION (37 C.F.R. section 1.97(b))

IDENTIFICATION OF TIME OF FILING THE ACCOMPANYING  
INFORMATION DISCLOSURE STATEMENT

The information disclosure statement submitted herewith is being filed within three months of the filing date of the application or date of entry into the national stage of an international application or before the mailing date of a first Office action on the merits, whichever event occurs last. 37 C.F.R. section 1.97(b).

CERTIFICATION UNDER 37 C.F.R. SECTION 1.10\*

(Express Mail label number is *mandatory*.)

(Express Mail certification is *optional*.)

I hereby certify that this correspondence and the documents referred to as attached therein are being deposited with the United States Postal Service on Dec. 12, 2001 (date), in an envelope as "EXPRESS MAIL POST OFFICE TO ADDRESSEE" service under 37 C.F.R. Section 1.10, Mailing Label Number EL59459451 US addressed to Box PCT, Assistant Commissioner for Patents, Washington, D.C. 20231.

Cathy Wilcox

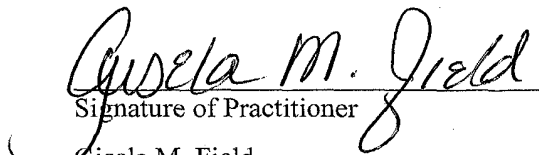
(type or print name of person mailing paper)

Signature of person mailing

(Transmittal of Information Disclosure Statement Within Three Months of Filing or Before Mailing of First Office Action--page 1 of 2)

Date: 12/12/01

Reg. No.: 47,562  
Tel. No.: 203-786-3473  
Customer No.: 25106

  
Signature of Practitioner

Gisela M. Field  
Genaissance Pharmaceuticals, Inc.  
5 Science Park  
New Haven, CT 06511



Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

**Complete if Known**

<b>Application Number</b>	09/936,499
<b>Filing Date</b>	09/12/2001
<b>First Named Inventor</b>	Stephen B. Liggett
Art Unit	
Examiner Name	

(use as many sheets as necessary)

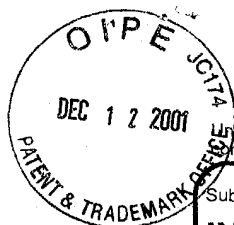
Sheet 1 of 7

Attorney Docket Number MWH-0031US

[illegible][illegible]Date  
Considered

1 Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.**



PTO/SB/08B (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet

2

of

2

**Complete if Known**

Application Number	09/936,499
Filing Date	09/12/2001
First Named Inventor	Stephen B. Liggett
Group Art Unit	
Examiner Name	
Attorney Docket Number	MWH-0031US

**OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	BA	GREEN, S.B. ET AL., "Influence of B2-Adrenergic Receptor Genotypes on Signal Transduction in Human Airway Smooth Muscle Cells," Am. J. Respir. Cell Mol. Biol., Vol. 13, p. 25-33, (1995).	
	BB	GREEN, S.B. ET AL., "Amino-Terminal Polymorphisms of the Human B2-Adrenergic Receptor Impart Distinct Agonist-Promoted Regulatory Properties," Biochemistry, Vol. 33, p. 9414-9419, (1994).	
	BC	GREEN, S.B. ET AL., "A Polymorphism of the Human B2-Adrenergic Receptor within the Fourth Transmembrane Domain Alters Ligand Binding and Functional Properties of the Receptor," The Journal of Biological Chemistry, Vol. 268, p.23116-21, (1993).	
	BD	HALL, IAN ET AL., "Association of Glu27 B2-Adrenoceptor Polymorphism with Lower Airway Reactivity in Asthmatic Subjects," The Lancet, Vol. 345, p. 1213-4, (1995).	
	BE	LIGGETT, S.B., "Functional Properties of Human B2-Adrenergic Receptor Polymorphisms," News in Physiological Sciences, Vol. 10, p. 265-273, (1995).	
	BF	LIGGETT, S.B., "The Genetics of B2-Adrenergic Receptor Polymorphisms: Relevance to Receptor Function and Asthmatic Phenotypes," The Genetics of Asthma, 1st ed., Marcel Dekker (New York), p. 455-478, (1996).	
	BG	LIGGETT, S.B. ET AL., "The Ile164 B2-Adrenergic Receptor Polymorphism Adversely Affects the Outcome of Congestive Heart Failure," J. Clin. Invest., Vol. 102 (No. 8), p. 1534-1539, (1998).	
	BH	LIGGETT, S.B., "Polymorphisms in the 5' Leader Cistron of the B2-Adrenergic Receptor," Pending U.S. Application, Serial No.09/856,803, (Filed May 25, 2001).	
	BI	MCGRAW, D.W. ET AL., "Polymorphisms in the 5' Leader Cistron of the Human B2-Adrenergic Receptor Regulate Receptor Expression," J. Clin. Invest., Vol. 102 (No. 11), p. 1927-1932, (1998).	
	BJ	REIHS AUS, ELLEN ET AL., "Mutations in the Gene Encoding for the B2-Adrenergic Receptor In Normal and Asthmatic Subjects," Am. J. Respir. Cell Mol. Biol., Vol. 8, p. 334-339, (1993).	
	BK	TURKI, JAMAL ET AL., "Genetic Polymorphism of the B2-Adrenergic Receptor in Nocturnal and Nonnocturnal Asthma," J. Clin. Invest., p. 1635-1641, (1995).	

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.